

ABSTRACT OF THE DISCLOSURE

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2 A controller for high torque, low RPM wind turbines and ocean current turbines.
3 The turbine consists of a large, input power shaft-mounted, rotating bull-gear with stationary
4 powertrains mounted around its periphery. The gear teeth on the bull- gear rotate past the teeth
5 on pinions, causing the pinions to turn and delivering power to each smaller powertrain. A
6 controller regulates torque experienced by each powertrain to assure that torques are balanced
7 between generators at any given system load. The regulating includes controlling local voltage at
8 each generator in a powertrain by a transformer configured as a reactor, in which coils of the
9 transformers are wired in parallel and are actively modulated with an SCR, solid-state, switching
10 device. Each generator is connected to a respective primary coil of a transformer and a
11 respective secondary coil is connected to an SCR.